

WRITTEN DECISION FROM THE
INTERNATIONAL SEARCH AUTHORITY
(ADDITIONAL SHEET)

Re: Item V: Reasoned statement in accordance with
Article 35(2) with regard to novelty,
inventive step and commercial
applicability; documents and
explanations to support this statement:

1. Technical field:

The invention relates to a rotation rate sensor
with a vibrational gyroscope

2. Independent claims:

Claim 1 (apparatus).

3. Prior art:

Reference is made to the following documents:

D1: US-A-5 617 176; OLYMPUS OPTICAL CO; 1st APRIL
1997

D2: PATENT ABSTRACTS OF JAPAN Vol. 1996, No 11,
29th November 1996 & JP-A-8 178668; NISSAN
MOTOR CO LTD; 12th July 1996

D3: EP-A-0 638 811; ROCKWELL INTERNATIONAL CORP;
15th February 1995

4. Novelty and inventive step - Articles 33(2) and
(3) PCT

4.1. Independent claim 1:

Document D1, which is considered to be the closest
prior art in relation to the subject matter of
claim 1, discloses a rotation rate sensor having a
circuit for noise reduction in the rotation rate
signal using a low pass filter.

The subject matter of independent claim 1 differs

from the closest prior art based on document D1 in that the low pass filter for noise reduction has a controllable bandwidth and in that the rotation rate signal is likewise applied to a bandpass filter, with the bandpass filter actuating the low pass filter using a threshold value circuit. The subject matter of claim 1 is thus novel as compared with document D1. All of the other documents are less relevant.

This arrangement achieves the objective technical object of reacting to fast changes in the rotation rate by increasing the band limit of the low pass filter. Such an arrangement is neither known nor obvious from the cited prior art. The requirements of Article 33(3) PCT are thus met.

4.2 Dependent claims 2 to 6:

The dependent claims 2 to 6 relate to additional features of the independent claim 1 to which they refer, and for this reason are considered to be novel and inventive.

5. Industrial applicability - Article 33(4) PCT

The invention claimed in claim 1 is industrially applicable in the field of rotation rate sensors with a vibrational gyroscope.

6. Clarity - Article 6 PCT

The application does not meet the requirements of Article 6 PCT because claims 1, 2, 3 and 4 are not clear for the following reasons:

As set out below, some of the features in the apparatus claims 1, 2, 3 and 4 relate to a method

for using the apparatus and not to the definition of the apparatus on the basis of its technical features. The intended restrictions are therefore not obvious from the claim, contrary to the requirements of Article 6 PCT:

Claim 1: "...characterized in that the noisy rotation rate signal is supplied to inputs on a low pass filter (11)..."

Claim 2: "...a band selector (15) arranged between them which...by producing a gradual transition..."

Claim 3: "...in that the bandpass filter (12) lets through changes..."

Claim 4: "...in that an output signal from the threshold value circuit (13) adopts a first level..."

The claims affected could be changed as follows:

Claim 1: "...characterized by a low pass filter (11) with a controllable bandwidth and a bandpass filter (12), the low pass filter and the bandpass filter being arranged such that the noisy rotation rate signal is supplied to inputs on this low pass filter (11) and on this bandpass filter, and in that the output of the bandpass filter (12)..."

Claim 2: "...a band selector (15) arranged between them such that it follows a

transition...by producing a general
transition..."

Claim 3: "...in that the bandpass filter (12) is
arranged such that it lets through
changes..."

Claim 4: "...in that the threshold value circuit
(13) is arranged such that an output
signal from the threshold value circuit
(13) adopts a first level..."

7. Certain defects in the international application

The features in the precharacterizing part of
claim 1 have not been provided with reference
symbols placed in brackets (Rule 6.2 b) PCT).

To meet the requirements of Rule 5.1(a)(ii) PCT,
documents D1 to D3 would need to have been cited
in the description; the relevant prior art which
they contain should have been briefly outlined.